

Schedule (updated: 4/6/09)

Geos495, Spring 2009

Class times: W 8:10 – 9:00 a.m. & F 8:10 – 11:00 a.m., Clapp 011 (basement)

Alisa's OH: M 3-4, W 9-10 or by appointment, Clapp 011

Tentative Lecture/Lab Schedule: Dates may be changed and updated information provided in class.

Week	Dates	Reading	Wednesday	Friday
1	1/28 1/30	On Course Website http://courseware.umn.edu/ - Handout: Introduction to the basics of ArcGIS (bring to lab)	Class Details - registration, class structure, textbooks, computer accounts, labs and entry codes, etc. Lecture: What is GIS? Lab 1: TAKE HOME: Navigate to course website (Blackboard http://courseware.umn.edu/) & complete Lab 1 (due 2/2)	Lab 2: ArcGIS Basics: Exploring seafloor topography (due 2/6) Extra Credit: Write up 1 ¶ summary of Colloquium talk Monday, 2/2, 4 p.m. "Using GIS and Remote Sensing for Fire and Fuels Management" (due 2/4)
2	2/4 2/6	Theobald Ch. 1 & 2 USGS-What is GIS? http://egsc.usgs.gov/isb/pubs/gis_poster/ Geographer's Craft – Data Sources for GIS http://www.colorado.edu/geography/gcraft/notes/sources/sources_f.html On Course Website - Handout: Data sources and formats	Lecture: Class project overview; Spatial Data and Database Concepts, data websites	Lab 3: ArcGIS Introduction: Precipitation, evaporation, and streamflow (due 2/13)
3	2/11 2/13	Theobald Ch. 4, 5 & 8 Geographer's Craft – Cartographic Communication, Foote and Crum http://www.colorado.edu/geography/gcraft/notes/cartocom/cartocom_f.html A Tale from the Map Vault, Murray	Lecture: Initial class project ideas; Communicating with Maps	Lab 4: Querying, Manipulating, and Mapping Data: Earthquake risk (due 2/20)

Week	Dates	Reading	Wednesday	Friday
		http://www.collectionscanada.ca/education/008-3060-e.html On Course Website - Handout: Basic Principles of Cartographic Design (bring to lab)		
4	2/18 2/20	Theobald Ch. 6 & 9 NSGIC – Metadata Primer (read Section 1, bookmark for future reference) http://www.lic.wisc.edu/metadata/metaprim.htm On Course Website - Optional Handout: Geodatabases	Lecture: Primer of Spatial Analyses	Lab 5: Understanding and Editing Geographic Data: Building a base map along the Clark Fork (due 2/27)
5	2/25 2/27	Theobald Ch. 3 USGS- Map Projections http://egsc.usgs.gov/isb/pubs/MapProjections/projections.html On Course Website - Handout: Scale and Projection (bring to lab)	Lecture: Scale and Projection <i>Due: Class project proposal</i>	Lab 6: Projections and Vector Analysis: Biotic and abiotic properties along the Kim Williams (due 3/6)
6	3/4 3/6	On Course Website - GPS User Manual and Instructions	Lab: In-class GPS use and download demo Misc.: Mid-course evaluation	Field Lab 7: GPS along Kim Williams (due 3/11)
7	3/11 3/13	Theobald Ch. 7 On Course Website - Handout: Raster Analysis Background Information	Lab 8: Introduction to Raster Analysis: Data comparisons along the Kim Williams (due 3/20)	Lab 8 continued
8	3/18 3/20		Lab 9: Raster Analysis: land cover change, WUI, and topography (due 3/25)	Lab 9 continued
9	3/25 3/27	Theobald Ch. 10	Lab 10: Hydro Analysis: delineating catchments and modeling flow (due 4/8)	Lab 10 continued

Week	Dates	Reading	Wednesday	Friday
10	4/1 4/3	Your favorite magazine	Spring Break	Spring Break
11	4/8 4/10		Lab 11: Distance Analysis: modeling Euclidean and cost distances (due 4/17)	Lab 11 continued
12	4/15 4/17	On Course Website - Final Project Grading Criteria	No Class (landscape ecology conference)	Lab 12: More Raster Analysis and Model Builder: Some stuff you should know (due 4/24)
13	4/22 4/24	UM Undergrad Research Web – Presenting Research http://www.dhc.umt.edu/ugresearch/presenting.htm Purrington – Advice on Designing Scientific Posters (and Pimp My Poster flickr link) http://www.swarthmore.edu/NatSci/cpurrin1//posteradvice.htm	Lecture/Demo: PowerPointing tips and practice	Open lab: final project assistance
14	4/29 5/1		Open lab: final project assistance	Open lab: final project assistance
15	5/6 5/8	On Course Website - GIS, Spatial Analysis, and Modeling: current status and future prospects (Maguire, Batty, and Goodchild 2005)	Guest Lecture: tentative - Tony Bertholote, GIS applied for Geosciences research	Lab 13: Outside of ArcGIS : Google Earth - Exploring air quality data (due 5/8) Due: <i>Final Project Paper</i>
16	5/11	Finals Week	MONDAY MAY 11, 10-12: Poster Presentations	